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(54) Abstract Title
Rearview mirror assembly

(57) A rearview mirror of an automobile comprises a frame 1 including two outer sleeves 12 in communication with a recess 11 and inner holed pegs 13; a mirror assembly 2 mounted on the frame 1; an attachment assembly 5 including two arms 51 matingly engaged with the sleeves 12, a holed lug 52 at one end of either arm 51, and an opposite shaped surface 54; two elastic members 3 each having two hooked ends secured between the lug 52 and the peg 13 for fastening the frame 1 and the attachment assembly 5 together; and a bracket 4 on the automobile body including a shaped surface 41 matingly fitted together with the shaped surface 54 of the attachment assembly 5 prior to securing the bracket 4 to the attachment assembly 5. The attachment assembly 5 is adapted to mount in the rearview mirror of the automobile which can be any model produced by the same manufacturer or one of any automobiles produced by different manufacturers.

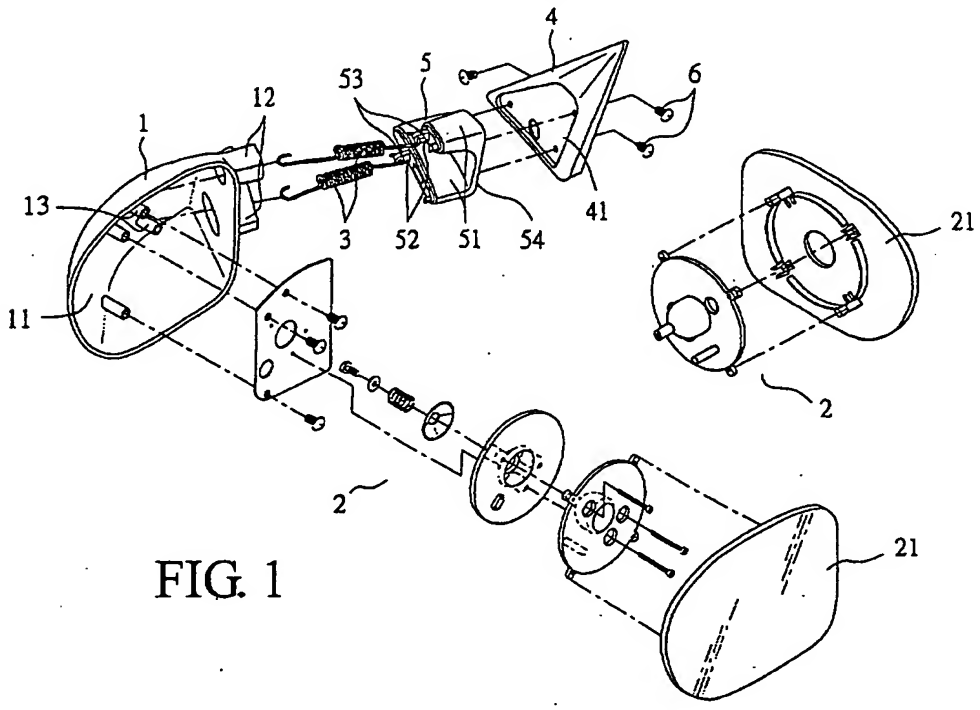

FIG. 1

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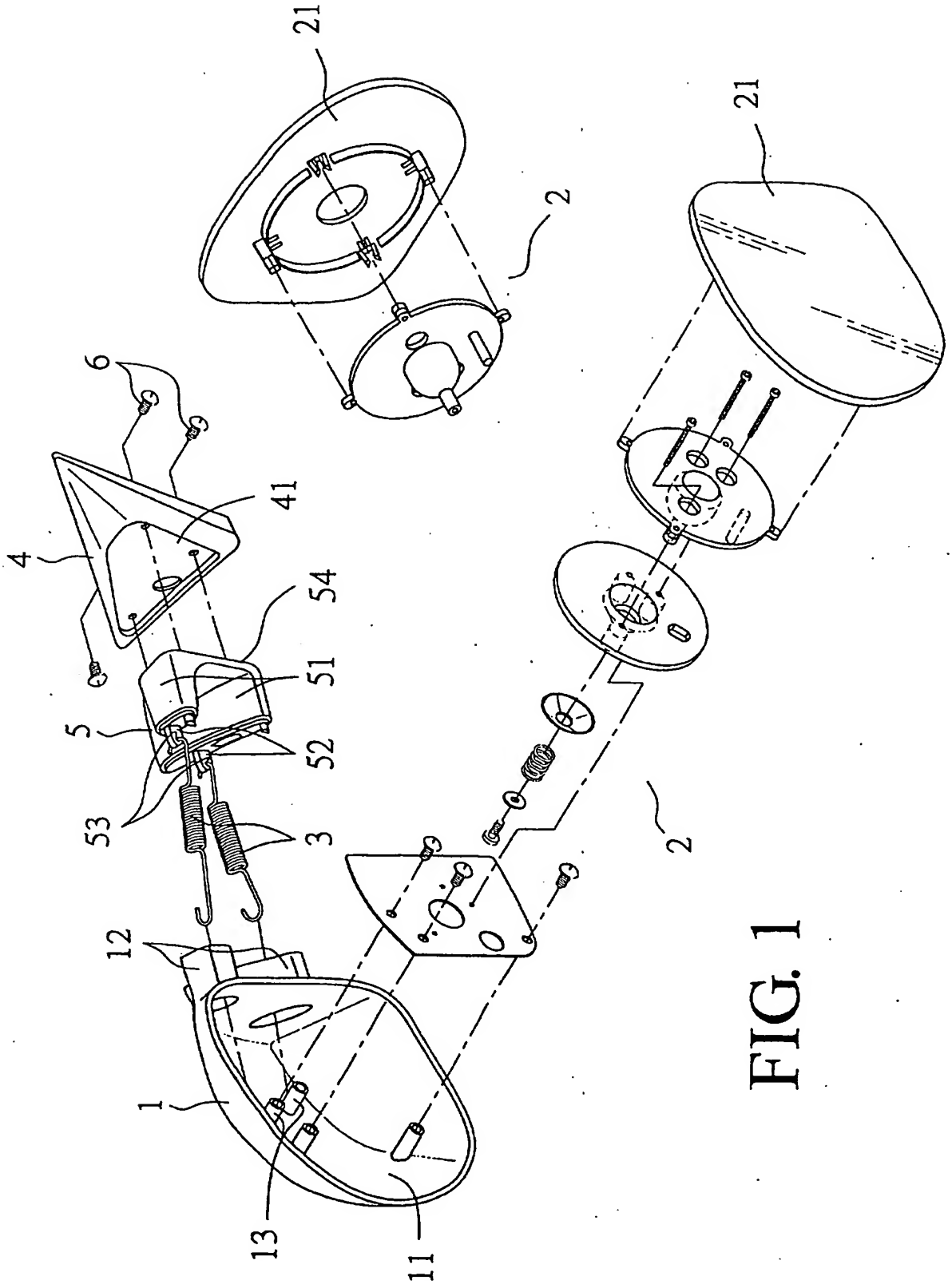

FIG. 1

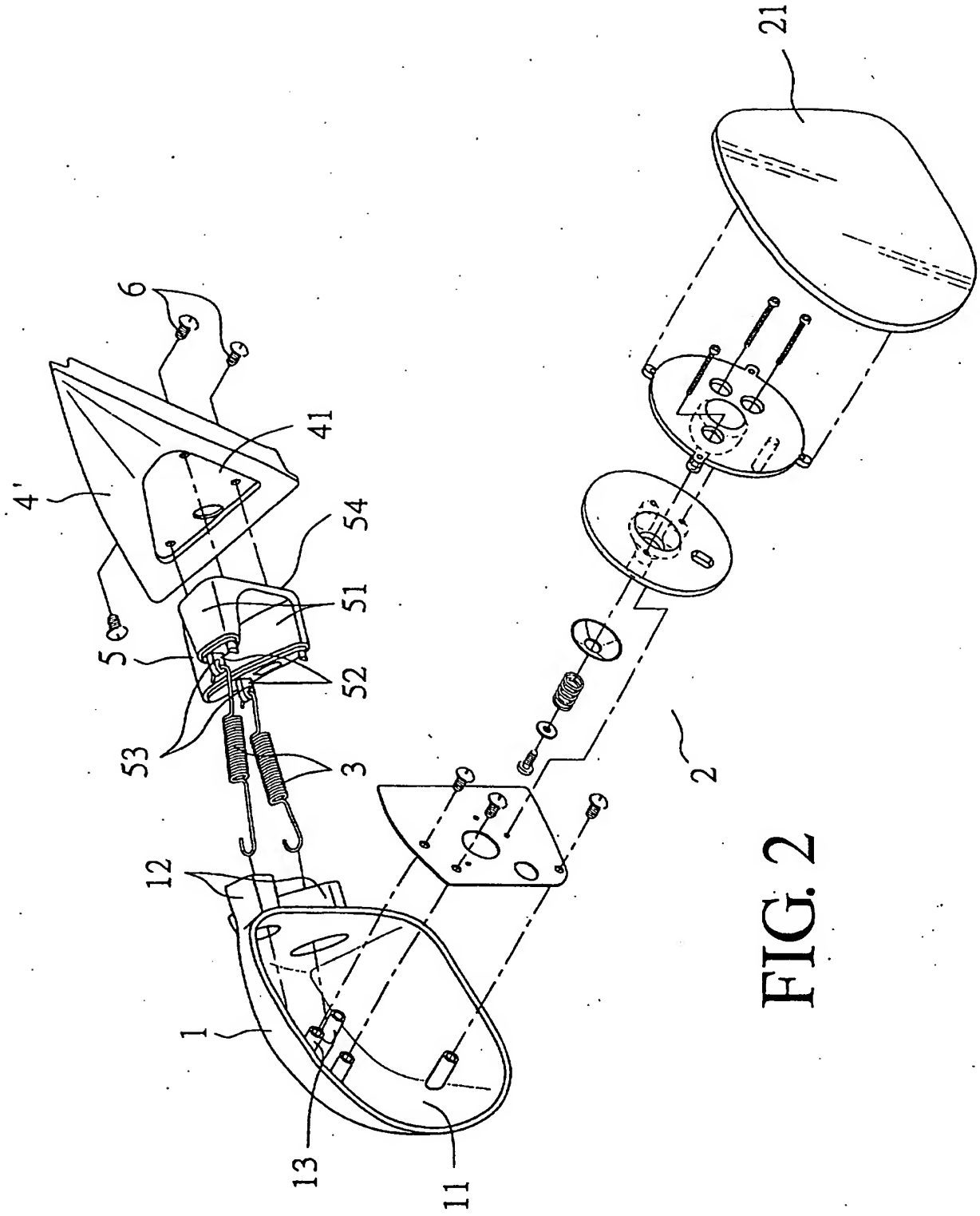

FIG. 2

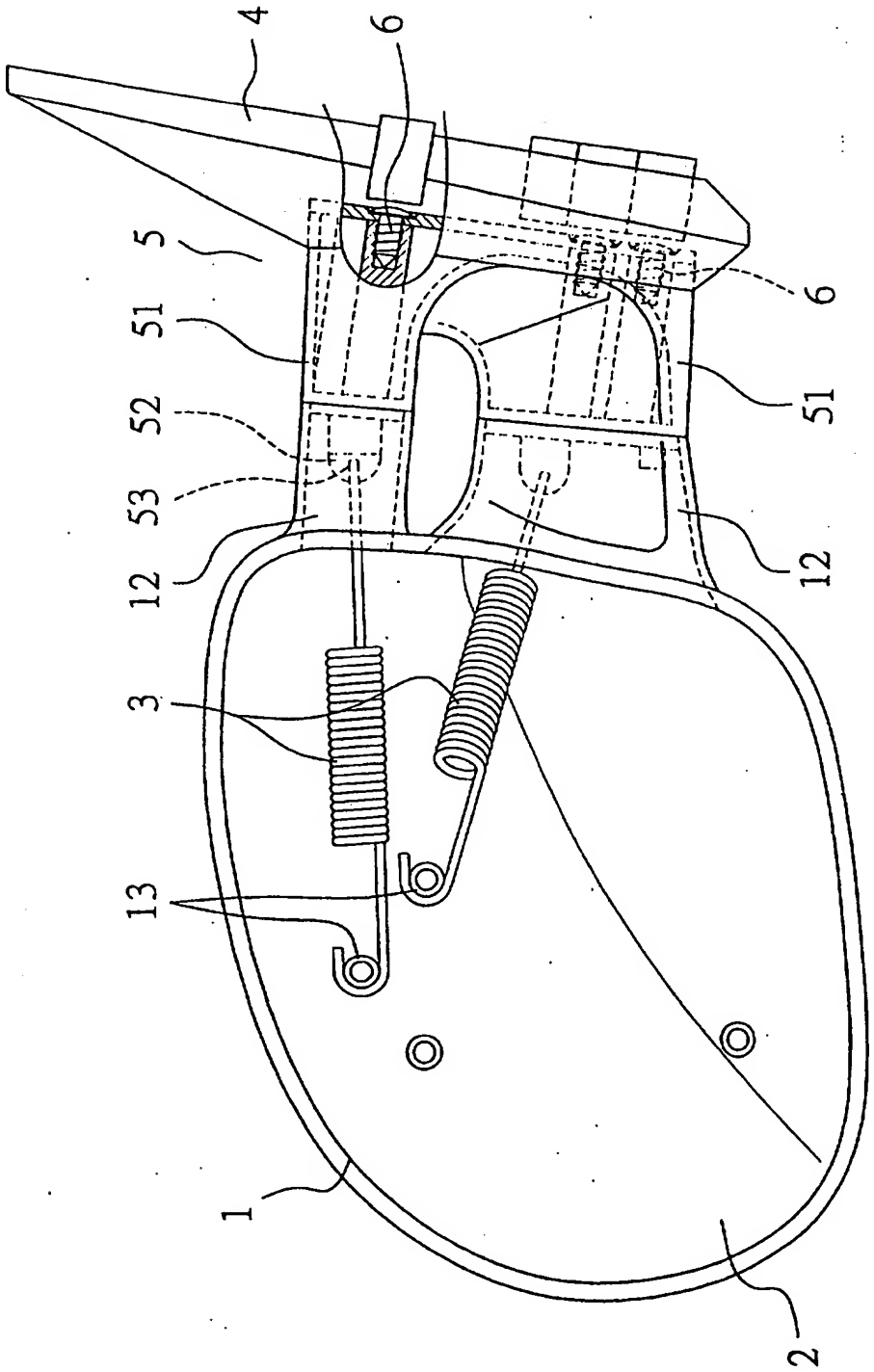

FIG. 3

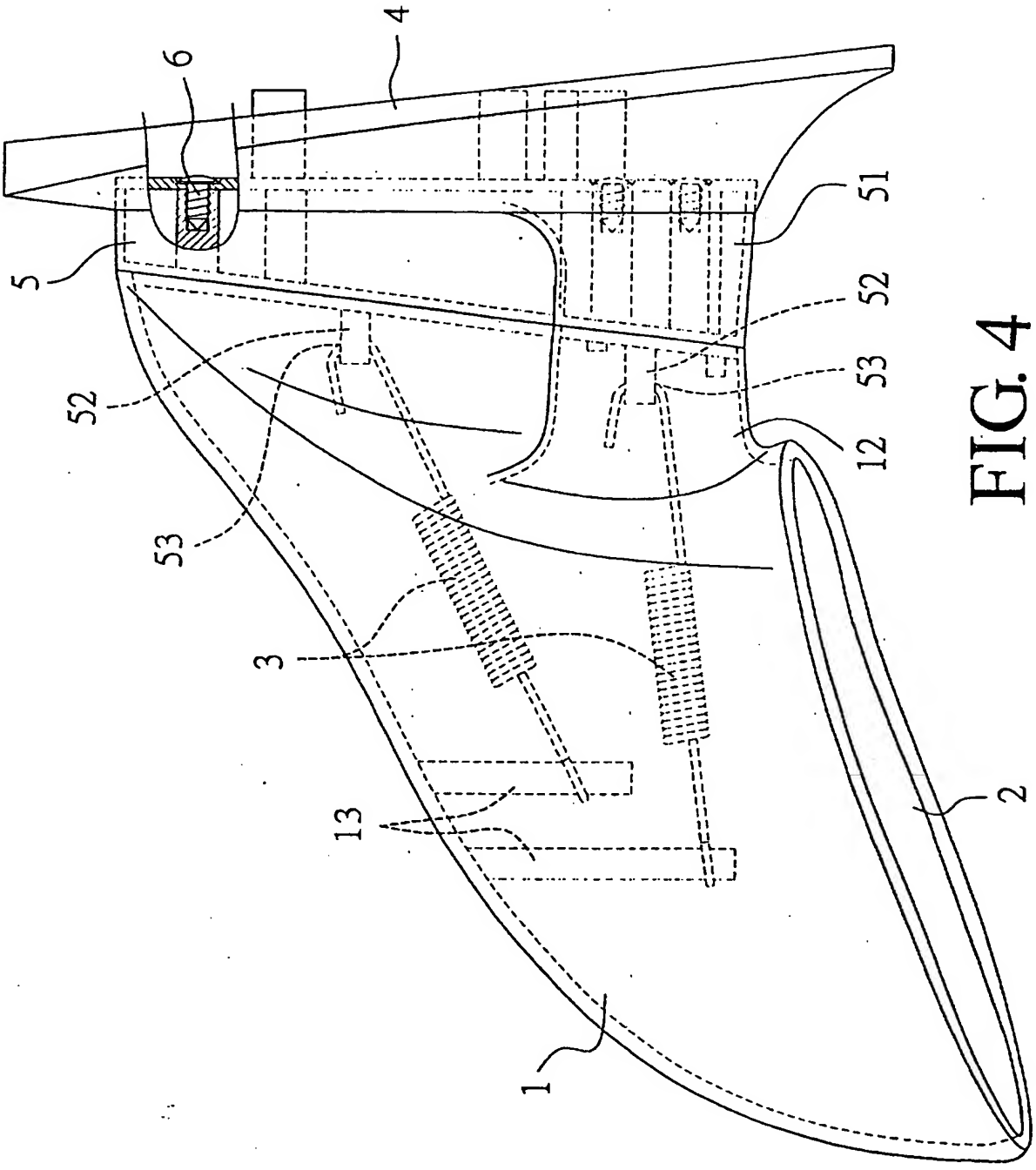

FIG. 4

REARVIEW MIRROR ASSEMBLY

FIELD OF THE INVENTION

The present invention relates to the rearview mirror of an automobile and more particularly to such a rearview mirror having an attachment assembly easily adapted to mount between the frame and the bracket of the rearview mirror assembly of the automobile which can be any model produced by the same manufacturer or even any one of automobiles produced by different manufacturers.

BACKGROUND OF THE INVENTION

Conventionally, a user has to buy the same rearview mirror for replacing a malfunctioned one. However, such buying is even difficult for an old automobile. This often frustrates users. Sometimes, an interchangeability of rearview mirrors between two models produced by the same manufacturer is not feasible. Oftentimes, an interchangeability of rearview mirrors between two automobiles produced by different manufacturers is impossible. Hence, a need exists for a rearview mirror which is highly adaptable to be mounted in any automobile.

SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide a rearview mirror mounted on an automobile comprising a frame including a recess, two outer sleeves in communication with the recess, and a plurality of pegs having an inner thread in the bottom of the recess; a mirror assembly mounted on the frame by threadedly securing to the pegs; an attachment assembly including two arms at one side matingly engaged with the sleeves, a holed lug at one end of either arm, and a shaped side surface opposite to the arms; two elastic members each having two hooked ends, one hooked end of each elastic member being inserted through the lug and the other hooked end thereof being inserted through one of the sleeves to be caught by one of the pegs for

fastening the frame and the attachment assembly together; and a bracket releasably secured to the automobile body, the bracket including a shaped side surface which is matingly fitted together with the shaped side surface of the attachment assembly prior to threadedly securing the bracket to the attachment assembly. Most importantly, the attachment assembly is easily adapted to mount between the frame and the bracket of the rearview mirror of the automobile which can be any model produced by the same manufacturer or even any one of automobiles produced by different manufacturers.

The above and other objects, features and advantages of the present invention will become apparent from the following detailed description taken with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded view of a rearview mirror of an automobile according to the invention in which bracket is shown in its first preferred embodiment;

FIG. 2 is view similar to FIG. 1 in which bracket is shown in its second preferred embodiment;

FIG. 3 is a front view in part section showing the rearview mirror mounted on an automobile body; and

FIG. 4 is a top view in part section of the rearview mirror shown in FIG. 3.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 1, 2, 3, and 4, a rearview mirror of an automobile constructed in accordance with the invention is shown. The rearview mirror comprises a frame 1 including a recess 11, two outer sleeves 12 in communication with the recess 11, and a plurality of pegs (three are shown) 13 having an inner thread in the bottom of the recess 11; a mirror assembly 2 including a mirror 21, the mirror assembly 2 being secured to the frame 1 by driving well-known fasteners (e.g., screws) through holes of the mirror assembly

2 into the pegs 13; an attachment assembly 5 including two arms 51 at one side matingly engaged with the sleeves 12, a lug 52 at one end of either arm 51, a hole 53 at each lug 52, and a shaped side surface (e.g., projection in this embodiment) 54 opposite to the arms 51; two springs 3 each having two hooked ends in which one hooked end of the spring 3 is inserted through the hole 53 and the other hooked end thereof is inserted through one of the sleeves 12 to be caught by one of the pegs 13 so as to fasten the frame 1, the mirror assembly 2, and the attachment assembly 5 together; and a bracket 4 releasably secured to the automobile body, the bracket 4 including a shaped side surface (e.g., a cavity in this embodiment) 41 so that the cavity 41 and the projection 54 can be matingly fitted together prior to threadedly securing the bracket 4 to the attachment assembly 5 by means of fasteners (e.g., screws) 6. The rearview mirror mounted on an automobile is shown in FIGS. 3 and 4. Note that the frame 1, the mirror assembly 2, the springs 3, and the bracket 4 are well known. Also, the shaped side surface 41 of the bracket 4 can be formed other than those shown in FIGS. 1 and 2. Moreover, the shaped side surface (e.g., cavity) 41 and the shaped side surface (e.g., projection) 54 can be interchanged as long as they can be matingly fitted together. In brief, the inventive attachment assembly 5 is highly adaptable. Hence, in a case that the rearview mirror is malfunctioned a user can buy the attachment assembly 5 in addition to the requisite frame 1, mirror assembly 2, springs 3, and bracket 4 for replacing the malfunctioned rearview mirror with the above components. Most importantly, the attachment assembly 5 is easily adapted to mount between the frame 1 and the bracket 4 of the rearview mirror of the automobile which can be any model produced by the same manufacturer or even any one of automobiles produced by different manufacturers.

While the invention has been described by means of specific embodiments,

numerous modifications and variations could be made thereto by those skilled in the art without departing from the scope and spirit of the invention set forth in the claims.

WHAT IS CLAIMED IS:

1. A rearview mirror mounted on an automobile comprising:

a frame including a recess, two outer sleeves in communication with the recess, and a plurality of pegs having an inner thread in the recess;

a mirror assembly mounted on the frame by threadedly securing to the pegs;

an attachment assembly including two arms at one side matingly engaged with the sleeves, a holed lug at one end of either arm, and a shaped side surface opposite to the arms;

two elastic members each having two hooked ends, one hooked end of each elastic member being inserted through the lug and the other hooked end thereof being inserted through one of the sleeves to be caught by one of the pegs for fastening the frame and the attachment assembly together; and

a bracket releasably secured to the automobile body, the bracket including a shaped side surface which is matingly fitted together with the shaped side surface of the attachment assembly prior to threadedly securing the bracket to the attachment assembly.

2. A rear view mirror substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

Amendments to the claims have been filed as follows

1. A rearview mirror for mounting on an automobile comprising:

a frame including a recess, two outer sleeves in communication with the recess, and a plurality of internally threaded pegs in the recess,

a mirror assembly mounted on the frame by fasteners that have threaded engagement with the pegs,

an attachment assembly including two arms at one side matingly engaged with the sleeves, an apertured lug at one end of each arm, and a shaped side surface opposite to the arms,

two elastic members each having two hooked ends, one hooked end of each elastic member being inserted in the aperture of the associated lug and the other hooked end thereof being inserted through one of the sleeves for engagement with one of the pegs for fastening the frame and the attachment assembly together; and

a bracket for releasable attachment to the automobile body, the bracket including a shaped side surface that is matingly fitted together with the shaped side surface of the attachment assembly prior to threadedly securing the bracket to the attachment assembly.

2. A rearview mirror as claimed in Claim 1, in which the shaped side surface of the attachment assembly includes a projection, and the shaped side surface of the bracket includes a cavity.

3. A rearview mirror assembly substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

Application No:	GB 0229649.9	**Examiner:**	Colin Thompson
Claims searched:	1 & 2	**Date of search:**	20 February 2003

Patents Act 1977 : Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
A	1	US 5959790 A (Hempelmann)

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC[V]:

B7J

Worldwide search of patent documents classified in the following areas of the IPC[7]:

B60R

The following online and other databases have been used in the preparation of this search report :

WPI, EPODOC, JAPIO